

Datasheet for #sbcw27043 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative bias and positive bias on the specific zones drawn below. To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.



Figure 1: Mechanical and electrical interface for #sbcw27043 DN (please note that AlN submount numbering is A0X6P)

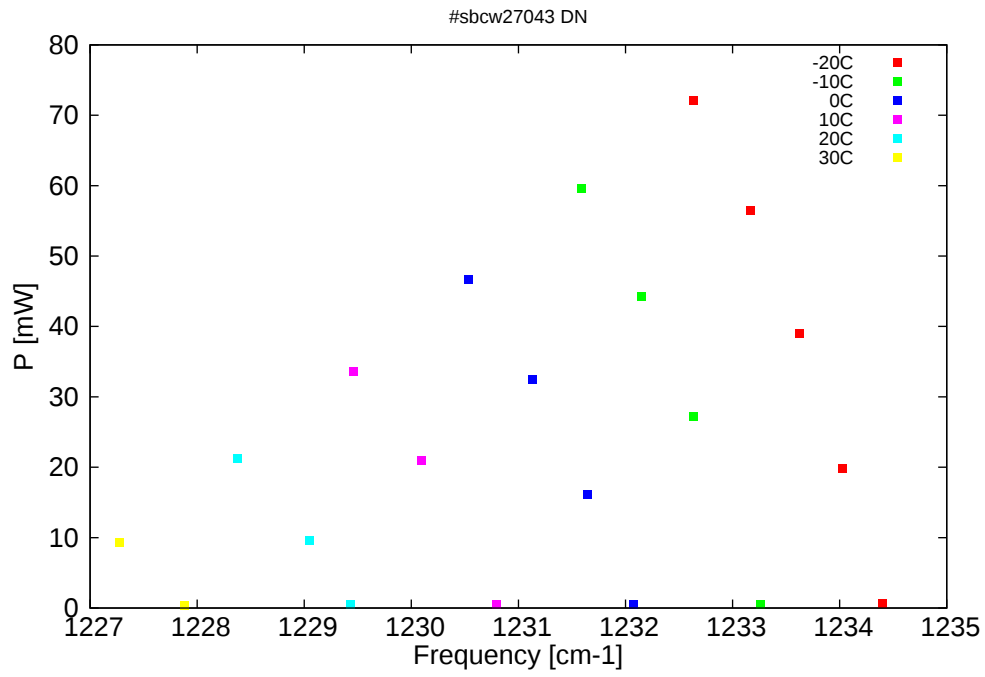


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

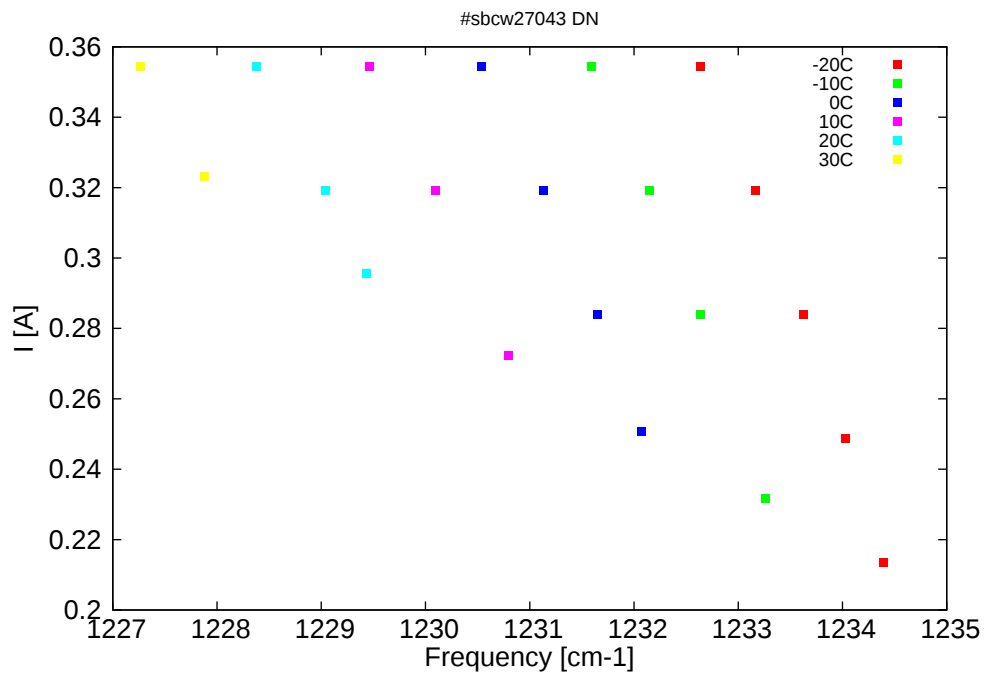


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8101.1	1234.4	0.7	-20	7.05	0.214
8103.5	1234	19.9	-20	7.33	0.249
8106.2	1233.6	39	-20	7.61	0.284
8109.2	1233.2	56.4	-20	7.9	0.319
8112.7	1232.6	72.2	-20	8.22	0.354
8108.6	1233.3	0.5	-10	7.17	0.232
8112.7	1232.6	27.3	-10	7.6	0.284
8115.9	1232.2	44.2	-10	7.91	0.319
8119.6	1231.6	59.6	-10	8.25	0.354
8116.4	1232.1	0.5	0	7.31	0.251
8119.2	1231.6	16.2	0	7.6	0.284
8122.6	1231.1	32.5	0	7.91	0.319
8126.6	1230.5	46.6	0	8.26	0.354
8124.8	1230.8	0.5	10	7.49	0.272
8129.4	1230.1	20.9	10	7.92	0.319
8133.7	1229.5	33.7	10	8.28	0.354
8133.8	1229.4	0.5	20	7.69	0.296
8136.4	1229	9.5	20	7.92	0.319
8140.8	1228.4	21.3	20	8.29	0.354
8144.1	1227.9	0.4	30	8	0.323
8148.2	1227.3	9.3	30	8.34	0.354

Table 1: Singlemode optical output power as function of operating parameters.

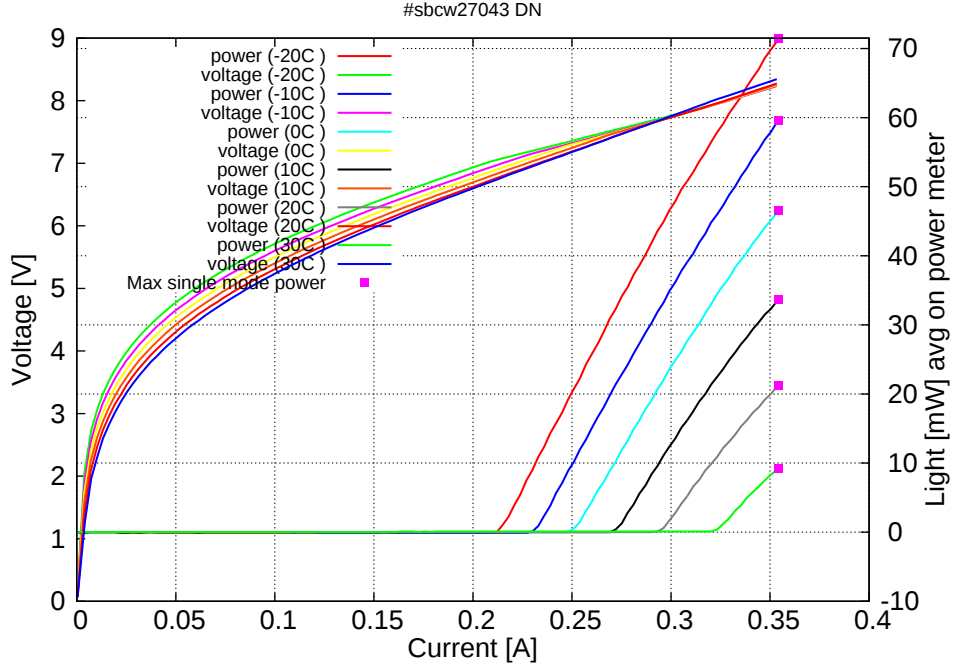


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.21A$ / $V_{th}=7.0V$ (2-wires measurements). Maximum operation

current: 0.355A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

